

Claims

1. A hydraulic power steering system for a vehicle, in particular an electrohydraulic power steering system for a motor vehicle, having a servo valve (2), the relative movement of whose control parts actuates a piston rod (3) of a servo cylinder (4) and changes at least one steering angle (R) of a wheel (5) which is operatively connected to the piston rod (3), and having an electric servo motor (6) which drives a rack (7) with the servo cylinder (4) for the purpose of adjusting the steering angle of the wheel (5) in the same direction, characterized in that the rack (7) and the piston rod (3) of the servo cylinder (4) act, in a parallel arrangement with one another, on an addition member (8) for the purpose of jointly adjusting the steering angle of the wheel (5).
2. The hydraulic power steering system as claimed in claim 1, characterized in that the rack (7) and the piston rod (3) are fixedly or articulatedly connected to the addition member (8).
3. The hydraulic power steering system as claimed in one of claims 1 or 2, characterized in that the electric servo motor (6) acts on a control part (10) of the servo valve (2) via a gearing (9).
4. The hydraulic power steering system as claimed in claim 3, characterized in that the control part (10) is connected to a drive output member (11) which interacts with the rack (7) for the purpose of displacing the latter.
5. The hydraulic power steering system as claimed in claim 4, characterized in that the drive output member (11) is a gearwheel (12) which is operatively connected to a steering

nut (13) or a recirculating ball nut (14) which is arranged around the rack (7).

6. The hydraulic power steering system as claimed in claim 4, characterized in that the drive output member (11) is a pinion (15) which meshes with a toothing of the rack (7).
7. The hydraulic power steering system as claimed in claim 1 or 2, characterized in that a steering shaft (16) acts on a control part (10) of the servo valve (2), and the servo valve (2) acts on the rack (7) via a drive output member (11).
8. The hydraulic power steering system as claimed in claim 7, characterized in that the electric servo motor (6) acts on the drive output member (11) via a superposition gearing (17), or on the rack (7) via a gearing (18).
9. The hydraulic power steering system as claimed in one of claims 1 to 8, characterized in that two electric servo motors (6) act on the rack (7) and/or on the control part (10) of the servo valve (2).
10. The hydraulic power steering system as claimed in one of claims 1 to 9, characterized in that, in the hydraulic power steering system (1), the servo cylinder (4), having electric servo motors (6) of different power, and racks (7) can be combined with one another for the purpose of transmitting different levels of steering power.